SIMMONS EXCERPT 3/19/98

Submittal Requirements for Review of Development Proposals in the Foothills and Canyons Overlay Zone

Applicants seeking site plan approval for development within the Foothills and Canyons Overlay Zone shall provide the following reports and plans. Where feasible and in order to ease the burden on applicants, required maps and plans may be combined.

A.1 Slope/Topographic Map, which shall depict the subject property's boundaries and shall depict contours at an interval of five (5) feet or less, provided that areas where development is proposed and areas with 30% or less slope cannot have a contour interval greater than two (2) feet and a scale greater than 1 inch equals 20 feet. The Planning Commission may require greater detail, including but not limited to depiction of slopes on adjacent properties and how proposed resulting slopes and finished grades will relate or transition to slopes existing on adjacent properties. The map shall highlight the following areas:

A.1-1. Areas of high geologic hazard, including areas subject to landsliding.

A.1-2. An analysis of the area and percentage of the total site that fall into the following slope categories:

(a) 0% to 20%;
(b) over 20%-25%;
(c) over 25%-30%;
(d) over 30%-40%; and
(e) over 40%.

A.1-3. Identification of all ridgelines on the property that are visible from public rights-of-way or trails.

A.1-4. Identification of all unstable slopes or areas of previous slide repair.

A.1-5. Where roads are proposed crossing slopes over 30% to 50%, cross sections of the proposed road shall be provided for every fifty (50) feet.

A.2 Grading Plan prepared and certified by a registered civil engineer or land surveyor. All requirements of the Uniform Building Code shall be followed. The plan shall include the following items:

A.2-1. A contour map showing the existing and proposed topography of the entire site. The map shall have a minimum of five-foot contour intervals at a minimum scale of 1 inch equals 100 feet where terrain modification is not proposed. In areas where terrain modification is proposed, two-foot intervals and a scale of 1 inch equals 20 feet are required.

A.2-2. Proposed limits of disturbance for roads, driveways, building site(s), septic systems, utilities, and services.

A.2-3. Septic tank and leach field; water storage reservoirs and wells, if proposed.

A.2-4. Area(s) that will remain undisturbed or that are undevelopable (i.e., outside the limits of disturbance) shall be shown.

A.2-5. Reference to any specific grading recommendations made in the geotechnical report.

A.2-6. Location, type, and height of proposed retaining structures showing top and bottom elevations.

A.2-7 Gradient of proposed cut and fill slopes must be shown in horizontal:vertical notation.

A.2-8. An analysis of the area and percentage of the total site that fall into the following slope categories:

(a) 0% to 20%;
(b) over 20%-25%;
(c) over 25%-30%;
(d) over 30%-40%; and
(e) over 40%.

A.2-9. An erosion control plan for all disturbed areas.

(a) The erosion control plan shall include the phasing and timing for implementation of erosion control measures to prevent and minimize erosion during and after construction.
(b) Erosion control plans shall comply with 42 U.S.C. §402(p) of the Clean Water Act.

A.2-10. A schedule showing when each stage of the project will be completed, including the total area of soil surface which is to be disturbed during each stage and an estimate of starting and completion dates.

A.2-11. Other items that may be required at the discretion of the Development Services Divisions if necessary to necessitate a complete and reasonable review of the development:

(a) The location of fill material to be imported to the site and confirmation from the geotechnical consultant that the engineering characteristics of the fill are appropriate for development.
(b) The location where material being exported from the site will be deposited. The land owner or agent accepting the deposit must be

identified and approval confirmed by the Development Services Division.

(c) Cross-sections at identified locations.

(d) Identification of all structures on, or adjacent to the site that may be affected by grading and development, and presentation of detailed mitigation measures to reduce any negative impact to existing structures during development.

A.3 Drainage Plan prepared and certified by a registered civil engineer. All plans shall comply with Chapter 12.70 of the Storm Drain and Flood Control Ordinance and the Uniform Building Code. The plan shall include the following items:

A.3-1. The direction of proposed surface drainage flow. Proposed locations and detailed plans of all surface and subsurface drainage devices such as walls, dams, sediment basins, storage reservoirs, or any other drainage control structure(s) must be shown.

A.3-2. The Development Services Division shall have the discretion to require that a hydrologic analysis be provided in order to determine adequate development setbacks to protect public safety and to preserve natural drainage patterns, riparian vegetation, and wildlife areas.

A.4 Tree/Vegetation Report prepared and signed by a professional qualified by training and experience to have expert knowledge of the subject. The report shall include the following items:

A.4-1 A survey of existing vegetative and tree cover, generally by type and density of vegetation, including:

(a) deciduous trees;

(b) coniferous trees;

(c) gamble oak or high shrub; and

(d) sage, grassland, and agricultural crops.

The Development Services Division shall have the discretion to require a more detailed tree/vegetation survey if the site has significant or unusual vegetation, stands of trees, or woodlands.

A.4-2. Identification of areas where existing trees/vegetation will be modified, where trees/vegetation will be preserved, and where new trees/vegetation will be planted. A statement describing who will be responsible for supervising the installation of any new trees/vegetation shall be provided.

A.4-3. Areas of critical wildlife habitat and migration routes identified by the Utah State Division of Wildlife Resources, if any. Maps of critical habitat areas are available in the offices of the Salt Lake County Planning Division

A.4-4. A vegetation maintenance plan that shall include an initial and continuing maintenance program and a sprinkling system or irrigation plan for all disturbed and revegetated areas. In areas with erosion potential, the plan must indicate what types of control measures or engineering solutions will be implemented to prevent soil loss during construction and after project completion, such as hydro seeding, silt traps, or other engineering solutions.

A.5 Geotechnical Report. The geotechnical conditions on the site shall be addressed by a registered geotechnical engineer and a qualified engineering geologist. A site-specific sub-surface investigation shall be performed that determines soil and/or bedrock conditions and makes recommendations for appropriate foundations for any proposed structures. When grading is proposed, the report shall propose recommendations for grading design parameters and specifications. All geologic hazards shall be identified, with recommended mitigation measures when the hazard(s) may affect the proposed development. The geotechnical report may be combined with a natural hazards report required for the property pursuant to Chapter 19.75 of this Title. The report shall include, at a minimum, the following items:

A.5-1. Statement of purpose and a description of the scope of the report.

A.5-2. Project description.

A.5-3. Site location map.

A.5-4. A site plan with proposed location of structures and roadways.

A.5-5. A map depicting the surficial and bedrock geology of the site and the location of pits, trenches, and borings. The map should show all active faults, landslides, artificial fill, and other geotechnical and hydrologic features important to site design. Site plans and geologic maps may be combined.

A.5-6. Logs of all sub-surface work.

A.5-7. Laboratory data must be presented to document engineering characteristics of soils and bedrock.

A.5-8. Recommendations for any proposed site grading.

A.5-9. Recommendations for any proposed retaining walls.

A.5-10. Recommendations for control of surface and sub-surface water drainage.

A.5-11. Recommendations for proposed setbacks or other hazard-reduction measures Such recommendations shall be shown on the site plan as appropriate.

A.5-12 Recommendations for mitigation of any identified natural hazard on sensitive soils.

A.5-13. Analysis whether the proposed development may negatively impact the geotechnical characteristics of the site (such as leach fields on a steep slope) and appropriate recommendations.

A.5-14. Documentation and justification of any deviations from the Uniform Building Code.

A.5-15. Requirements for geotechnical observation and documentation during grading and construction.

A.5-16. A concluding statement or recommendation indicating whether the site is suitable for the proposed development, with or without limitations.

A.5-17. Signatures and statements of qualifications, listing education and work experience of the both the geotechnical engineer and engineering geologist who conducted the study and prepared the report. The geotechnical report may include both the geotechnical engineer's and engineering geologist's findings and recommendations, or may be presented separately.

A.6 Fire Protection Plan prepared by a qualified professional, which shall include at a minimum:

A.6-1. Identification of high fire hazard areas on the site or adjacent to the site. High hazard fire areas typically include undeveloped canyons, grasslands, and woodland hillsides where native vegetation has become overgrown.

A.6-2. [Optional] Identification and classification of portions of the site by their degree of risk from wild fires to plant communities.

A.6-3. Recommendations for mitigation of risks stemming from any identified high fire hazard areas on the site, including but not limited to proposals for limits of disturbance for principal and significant accessory buildings, recommendations for fire-resistant roofing and building materials, and recommendations for selective tree/vegetation removal and revegetation with specified fire-resistant plants.

A.7 Detailed Site Plan (Drawn over the slope/topographic map as a base) prepared by a qualified professional, which shall include at a minimum:

A.7-1. Property lines and dimensions of the subject site and all adjacent properties, showing all easements.

A.7-2. The applicant's offer of proposed limits of disturbance and all roads, driveways, parking areas, sidewalks, trails, building pads, and utilities/services proposed for within such limits.

A.7-3. Distances between buildings and/or structures.

A.7-4. Stream corridors, delineated wetlands, and required setbacks. Delineation of any portions of the development that fall within Salt Lake City's watershed areas. (Maps of the city's watershed areas, over which Salt Lake City has extraterritorial jurisdiction--*see* Section 19.72.020.B.--are on file with the Salt Lake County Planning Commission and Planning Division.)

A.7-5. Location, height, and materials of walls and fences.

A.7-6. Location of exterior light fixtures and typical lighting distribution.

A.7-7. Location of proposed on-site wastewater and culinary water systems.

A.7-8. Site Plan summary with the following information:

(a) Total lot area consumed by proposed limits of disturbance.
(b) Density.
(c) Number of unit types, square footage by unit type, number of stories, and number of units per building.
(d) Proposed landscape area (square footage and percentage).
(e) Required and proposed number of parking spaces.

A.8 Illustrative Building Elevations and Roof Plans prepared by a qualified professional:

A.8-1. All sides of existing and proposed building structures (landscaping should not obstruct the design of a building).

A.8-2. Vertical dimensions, exterior materials, textures, and colors of all proposed and existing buildings.

A.8-3. External materials to be used, including walls, glass (type/color), railings, detailing, fencing, signs, etc.

A.8-4. Design of accessory structures, such as carports, trash enclosures, retaining walls, trellis, etc. (landscaping detail should not hide design details).

A.8-5. If an addition to an existing building is proposed, show the elevations of the existing building together with those of the addition.

A.8-6. Roofing plans for all proposed structures, which shall include at a minimum:

(a) Basic site plan elements and property lines.
(b) Direction and slope of drainage and snow shed.
(c) Drainage collectors.
(d) Location of rooftop equipment and method of screening.
(e) Outline of building footprint below.
(f) Differentiate between levels for structures with multiple roof levels.

A.9 Traffic Impact Study, prepared, stamped, and signed by a qualified and registered professional traffic engineer. A scope of work study shall first be submitted to the Development Services Director for approval in consultation with the County Public Works Engineer, and shall identify the specific roadway and intersections to be studied, along with the planned data collection and analysis procedures. The Development Services Director must approve the scope of work study before the traffic impact study will be accepted as part of the application.

Data collection for the traffic impact study shall be the responsibility of the applicant. The traffic impact study shall include at a minimum the following (additional requirements, such as number of copies and sources of county information are available from the Salt Lake County Public Works Engineer):

A.9-1. Introduction and Summary, including the following elements:

(a) Purpose of Report and Study Objectives
(b) Executive Summary, including:
- Site location and study area.
- Development description.
- Principal findings.
- Conclusions.
- Recommendations.

A.9-2. Proposed Development (Site and Nearby), including the following elements:

(a) Summary of Development, including:
- Land use and intensity.
- Location.
- Site plan.
- Zoning.
- Phasing and timing.

A.9-3. Area Conditions, including the following elements:

(a) Study Area, including the area of influence and area of significant traffic impact.

(b) Study Area Land Use, including existing land uses, existing zoning, and anticipated future development.

(c) Site Accessibility, including:

- Area roadway system, existing and future.
- Traffic volumes and conditions.
- Transit service.
- Transportation system management program.

A.9-4. Projected Traffic, including the following elements:

(a) Site Traffic (present and horizon year), including:

- Trip generation.
- Trip distribution.
- Trip assignment.

(b) Through Traffic (present and horizon year), including:

- Method of projection.
- Non-site traffic in study area, including method of projection, trip generation, trip distribution, modal split, and trip assignment.
- Estimated volumes.

(c) Total Traffic (present and horizon year).

A.9-5. Traffic Impact Analysis, including the following elements (*note*: more detailed description of each element is available from the County Public Works Engineer):

(a) Capacity and Level of Service, including analysis of:

- Signalized intersections.
- Unsignalized intersections.
- Roadway network.
- Turning vehicle storage space.

(b) Site Access, including analysis of:

- Driveways.
- Service vehicle access.

(c) Safety.

(d) Site Circulation and Parking.

(e) Transit Impacts.

(f) Neighborhood Impacts.

A.9-6. Improvement Analysis and Mitigation Measures, including the following elements (*note*: more detailed description of each element is available from the County Public Works Engineer):

(a) Improvements to Accommodate Base Traffic.

(b) Additional Improvements to Accommodate Site Traffic.
(c) Alternative Improvements, including Transportation Demand Management (TDM).
(d) Status of Improvements Already Funded, Programmed, or Planned.
(e) Evaluation/Feasibility.

A.9-7. Findings, including the following elements:
(a) Site Accessibility.
(b) Traffic Impacts.
(c) Need for Any Improvements or Mitigation Measures.
(d) Compliance with Applicable Local Codes/Ordinances.

A.9-8. Recommendations, including the following elements:
(a) Site Access/Circulation Plan.
(b) Roadway Improvements, On-Site and Off-Site.
(c) Transportation System Management Actions, including:
- On-site operational.
- On-site.
- Off-site.

(d) Other.

A.9-9. Conclusions.

SIMMONS ENCLOSURE 3/19/98

Chapter 19.73
FOOTHILLS & CANYONS
SITE DEVELOPMENT AND DESIGN STANDARDS

Sections

19.73.010 PURPOSE AND INTENT

A. The general purpose of these standards is to promote development that will balance the rights of the landowner with protection of the County's sensitive lands, especially its irreplaceable foothill and canyon environments. Many of these standards are broad in nature to allow flexibility in design so development can be evaluated on a site by site basis, while insuring that development will be compatible with the natural landscape, and consistent with the public welfare.

B. The development standards contained herein are intended specifically to accomplish the following purposes:

1. Preserve and enhance the beauty of the landscape by encouraging the maximum retention of natural topographic features, such as drainage swales, streams, slopes, ridge lines, rock outcroppings, vistas, natural plant formations, trees, and similar features.

2. Encourage planning, design, and development of building sites in a manner that provides the maximum in safety and enjoyment while adapting development to, and taking advantage of, the best use of natural terrain.

3. Establish a foundation for development in sensitive lands to insure a more harmonious relationship between man-made structures and the natural setting.

4. Direct new development in the canyons and foothills toward areas meeting suitability criteria as outlined in the Wasatch Canyons Master Plan suitability analysis, and other applicable master or community plans.

19.73.020 USING THIS CHAPTER

The development and design standards set forth in this Chapter fall into two categories:

A. Mandatory standards, which are identified by a "+" notation in the left-hand margin; and

B. Advisory standards that are strongly encouraged, but not mandatory, which are identified by a "o" in the left-hand margin.

Subdivisions and development subject to this Chapter shall comply with all of the "+" standards and shall attempt to incorporate, to the extent feasible or practical, all of the "o" standards.

19.73.030 SITE SELECTION AND PLANNING STANDARDS

A. To the maximum extent feasible[1], match the development program to the available land on the site.

1. A site shall be selected that is suitable for the type of building or use being planned without major alterations to the site.

2. The minimum and maximum slope gradients that can work with each type of land use in the development program shall be considered. Compare the amount of land needed for the program with the amount of buildable land on the site. Select a site that best suits the type of building or use recognizing the particular opportunities and disadvantages of the site.

3. Avoid sites that show evidence of slope instability, landslides, avalanche, flooding, or other natural or man-made hazards. (*See* Chapters 19.75, "Natural Hazard Areas," and 19.74, "Floodplain Hazard Regulations.")

B. Site buildings in a manner that preserves existing land forms. (*See* Figure 1.)

1. Each building shall be located so that it does not dominate the site.

2. To the maximum extent feasible, the most prominent areas of the site shall be left in their natural condition. Structures shall be screened using existing land forms and vegetation. (*See* Section 19.72.030.H., "Tree and Vegetation Protection.")

3. To the maximum extent feasible, buildings should be placed in the following locations on a site:
   a. Within tree masses to screen buildings;
   b. At the edge of trees or land masses overlooking open space; or
   c. In open areas where they are not visible from roads, trails, or other public lands.

[1]For purposes of this Chapter, "Maximum Extent Feasible" shall be defined as set forth in Section 19.72.070 of this Title: "Means no prudent, practical, and feasible alternative exists, and all possible planning to minimize potential harm has been undertaken. Economic considerations may be taken into account but shall not be the overriding factor in determining 'maximum extent feasible'."

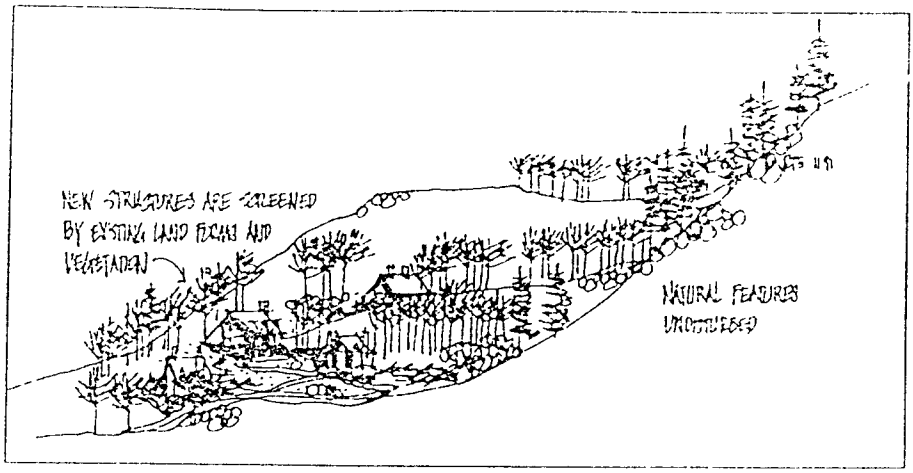

Figure 1: Canyon Foothill continues to serve as a visual amenity to the site and surrounding areas

C. Site buildings in a manner that preserves significant views (*See* Figure 2.)

1. Buildings should be designed to fit their sites and to leave natural massing and features of the landscape intact. Treat each building as an integral part of the site rather than an isolated object at odds with its surroundings.

2. To the maximum extent feasible, views both to the site and to features beyond, as seen from public rights-of-way, trails, and other public lands, shall be maintained. To the maximum extent feasible, new construction shall not dominate views or obscure the views of others.

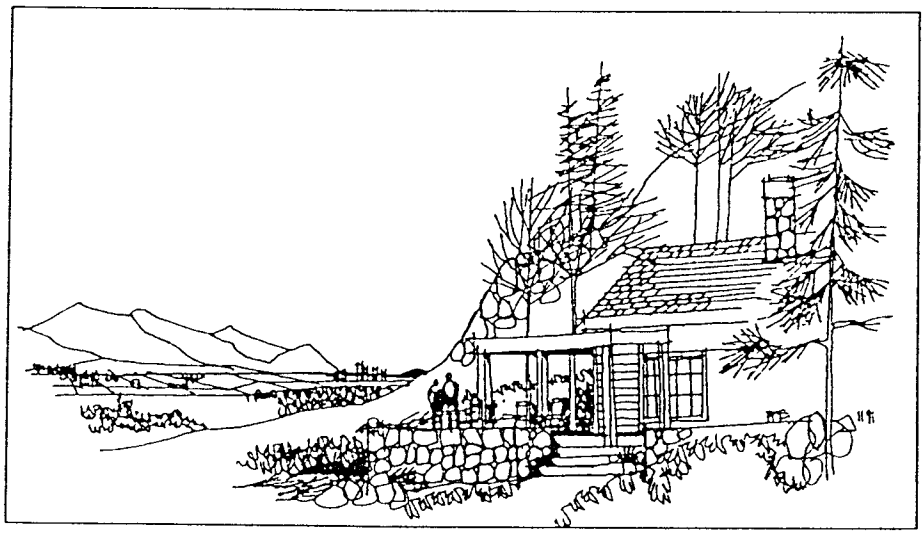

Figure 2: Site buildings in a manner that preserves significant views

D. Site buildings so their form does not break prominent skylines. (*See* Figure 3.)

1. Buildings shall be sited off of highly visible places and designed so they are not obtrusive, do not loom out over the hillside, and do not break prominent skylines. Skylines are ridges or hilltops that do not have backdrops behind them. Heavily traveled roads or public areas are key vantage points.

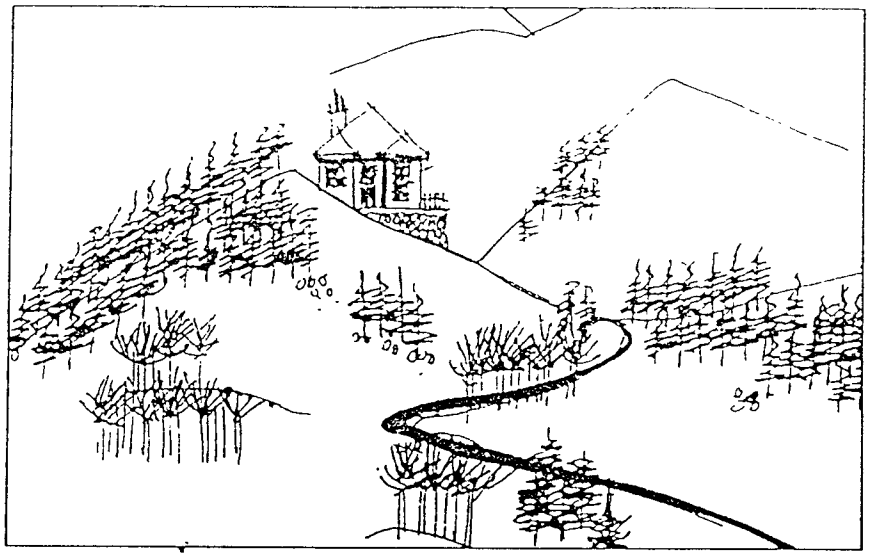

Figure 3: NO: Site structures so their form does not break prominent skylines.

E. Site buildings in a manner that preserves significant trees and vegetation. (*See* Figure 4.)

1. The building shall be sited in a place where a minimum amount of trees and vegetation will need to be removed. (*See* Section 19.72.040, "Establishment of Limits of Disturbance.")

2. New construction shall comply with Section 19.72.030.H., "Tree and Vegetation Protection," and Section 19.73.060 below, "Landscaping and Vegetation."

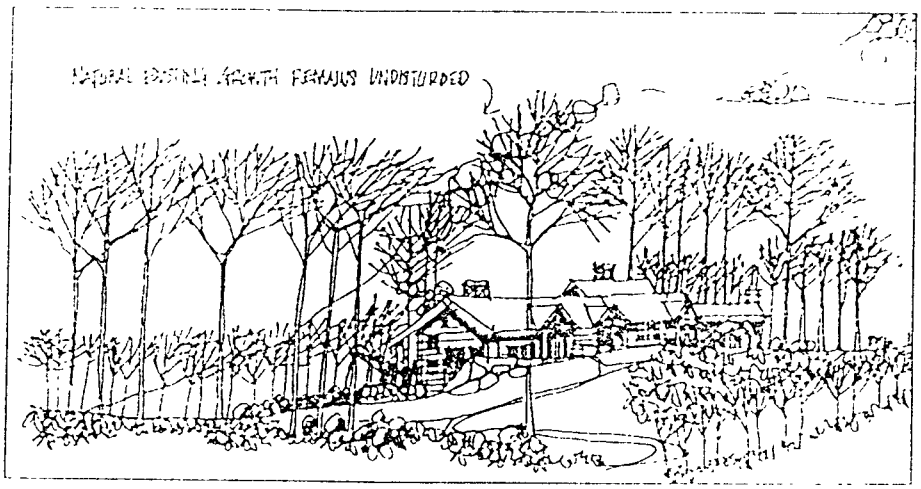

Figure 4 Site buildings in a manner that preserves significant vegetation

F Cluster buildings and parking, and coordinate neighboring developments. (*See* Figures 5 and 6.)

O 1. Clustering is encouraged to reduce the amount of land being disturbed and to share the cost of providing services, road and parking area maintenance, snow removal, etc. (*See* Section 19.73.090, "Access, Circulation, and Off-Street Parking" below.)

O 2. Cooperation among adjoining land owners to achieve coordinated development is strongly encouraged. For example, clustering buildings and combining or sharing services into a central location reduces the number of access roads and parking areas within a site.

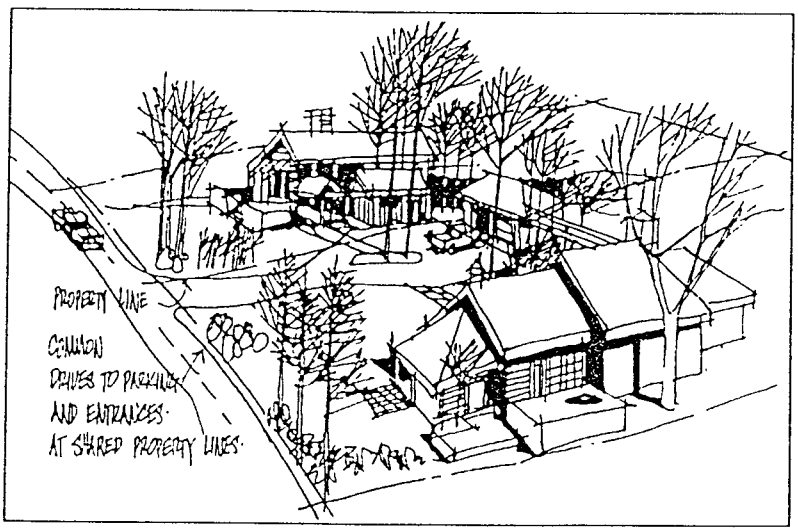

Figure 5 Cluster residential buildings and driveways to minimize disruption of natural features

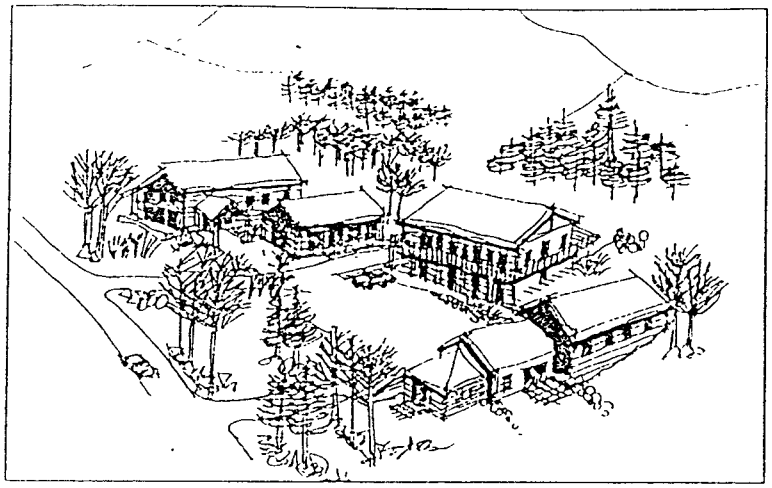

Figure 6 Cluster businesses and access drives to minimize disruption of natural features

G. Locate parking facilities to minimize their visual impact. (*See* Figure 7.)

1. Parking facilities shall be located so that they can be screened to blend into the natural environment and will not require backing onto a public street. (*See* Section 19.73.090 below, "Access, Circulation, and Off-Street Parking.")

2. To the maximum extent feasible, parking facilities shall be located to the rear or side of main buildings facing away from a public street or where they can be screened so they do not dominate the streetscape. Parking facilities shall be designed to follow the existing topography and to provide adequate snow storage areas.

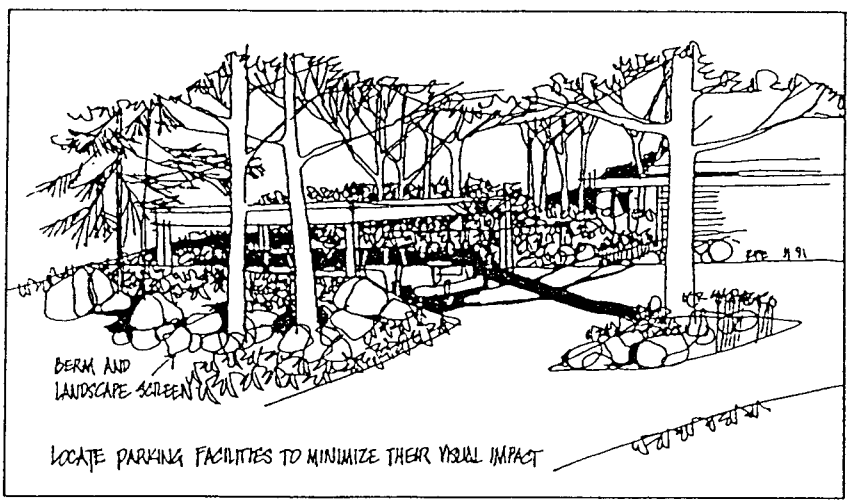

Figure 7: Locate parking facilities to minimize their visual impact.

H. Place utility lines underground

+ 1. To the maximum extent feasible, utilities shall be placed underground and within existing roadways or in established shoulders in order to minimize the impact to existing natural features such as natural vegetative patterns and land forms. (*See* Figure 8.)

+ 2. Tree cutting for utility corridors shall be feathered to reduce visual impacts. All disturbed areas shall be revegetated. (*See* Section 19.73.060, "Landscaping and Revegetation" and Section 19.72.030.H, "Tree and Vegetation Protection.")

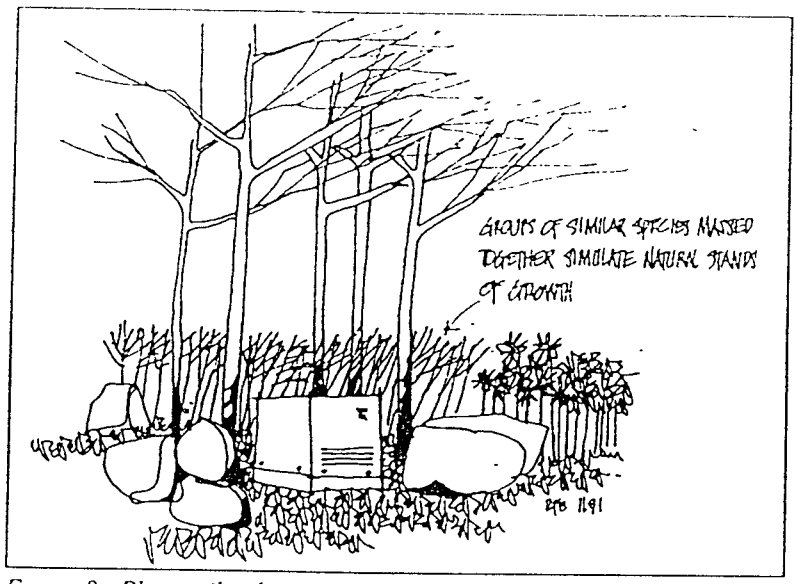

Figure 8: Place utility lines underground

19.73.040 BUILDING SCALE AND DESIGN

A. Design buildings so they solidly meet the ground plane. (*See* Figures 9 and 10.)

+ 1. Building designs requiring a strong structural statement such as extensive cantilevers or cuts and fills on sensitive hillsides shall be prohibited.

+ 2. To the maximum extent feasible, placing buildings on piers such that exterior walls do not continue down to the ground shall be prohibited because of aesthetic and energy efficiency concerns.

O 3. Buildings that firmly meet the ground convey an appearance of greater permanence, and shall be strongly encouraged.

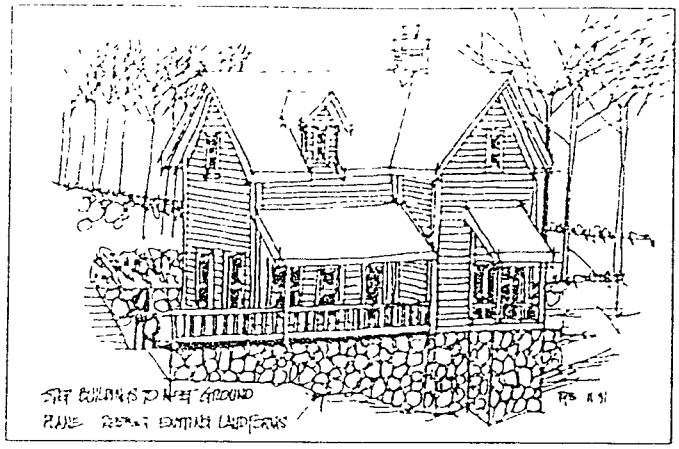

Figure 9 Design buildings so they solidly meet the ground plane

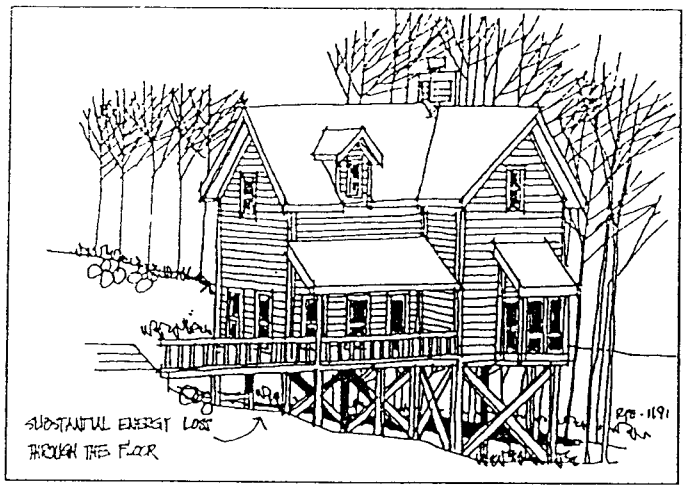

Figure 10 NO this building is not designed to follow natural terrain contours

B. Design buildings on hillsides to follow the natural terrain. (*See* Figure 11.)

1. Buildings shall be located to minimize earth work and land disturbance.

2. To the maximum extent feasible, buildings shall be sited in locations that are sympathetic to existing contours rather than those that require a building solution that would dominate the site. Buildings shall be designed to follow natural contours rather than modifying the land to accept a building design not tailored to the site. (*See* Section 19.73.070, "Grading" and Section 19.72.030.C., "Grading Standards.")

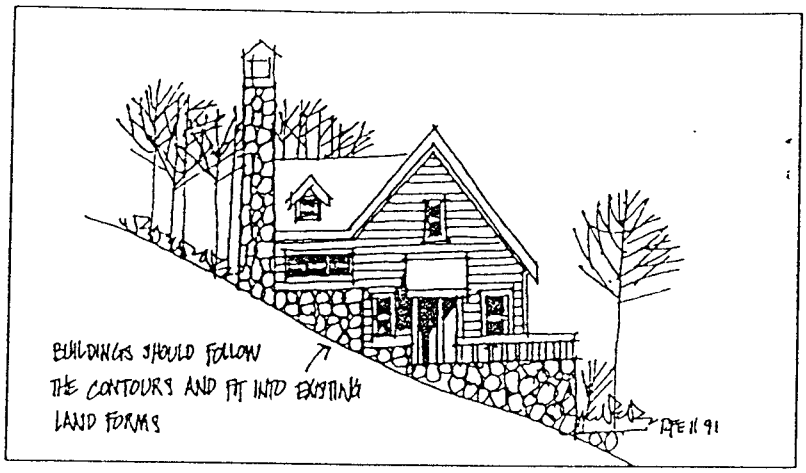

Figure 11. Design buildings on hillsides to follow the natural terrain

C. Design buildings to minimize mass and scale. (*See* Figures 12-15.)

1. To the maximum extent feasible, building design shall incorporate changes in the planes of walls and changes in the slope and height of roof lines to add variety, create visual interest, and minimize scale.

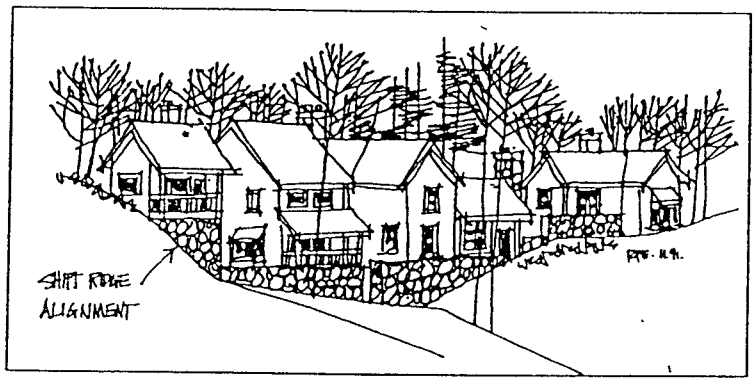

Figure 12: Building design should minimize its scale.

2. Buildings can be made to seem larger or smaller depending on the proportional relationship of separate building elements. Human-scale buildings create a comfortable and friendly atmosphere. Building scale should complement rather than dominate the landscape.

3. To the maximum extent feasible, the massing of buildings shall be scaled to harmonize and balance with the specific site and its natural features, especially when buildings are located at tree or land mass edges or in the open, by incorporating the following design principles:

a. Roof lines and building mass should echo the angles and shapes repeated in the natural landscape, and shift or bend to change directions; and

b. Building mass and wall lines shall be broken up to conform to existing slope and avoid unbroken expanses of building mass and walls that can intrude into the natural canyon setting and dominate a site.

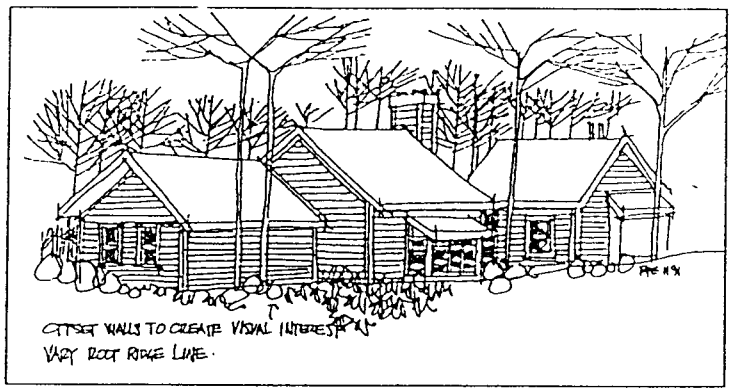

Figure 13. Building design should minimize its scale.

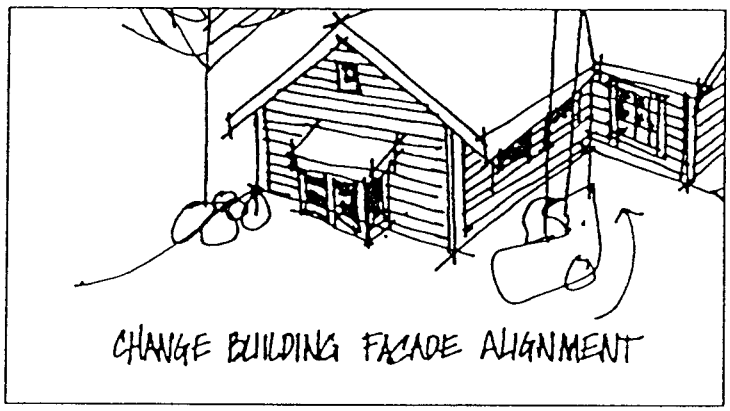

Figure 14. Building design should minimize its scale.

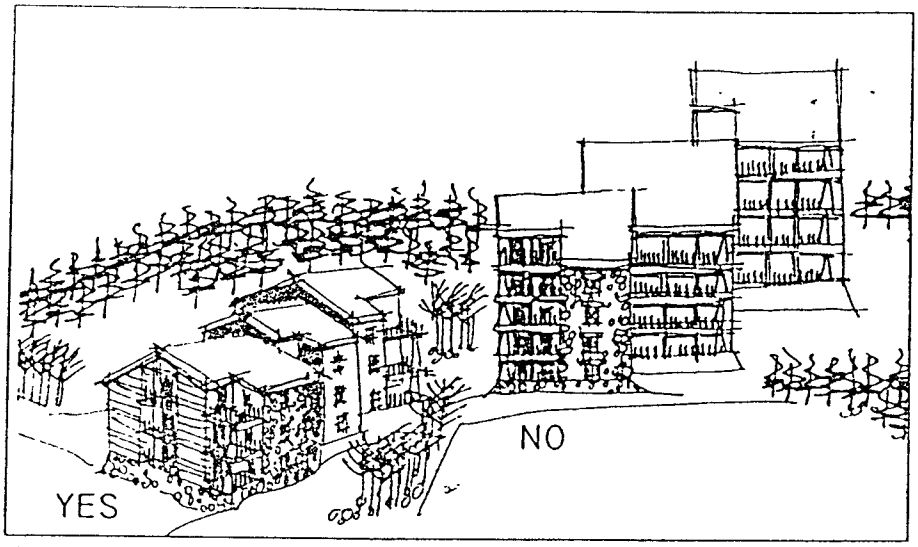

Figure 15 Building design should minimize its scale.

19.73.050 BUILDING MATERIALS AND COLORS

A. Use exterior wall colors that harmonize with the landscape and surrounding buildings.

✚ 1. Indigenous materials and colors shall be used in order to mimic natural textures.

✚ 2. To the maximum extent feasible, predominant tones on exterior walls shall tend toward neutral colors such as warm earthy hues, dark green of forests, whites, greys and grey-brown of the mountains, the tan of grasses, and similar colors. Bright, harshly contrasting color combinations shall be avoided.

B. Use roof surfacing materials that blend with the colors of the adjacent landscape and that are composed of materials which reduce the risk of fire.

✚ 1. The color of roof surfacing materials shall be either brown, dark green, grey, or other color that blends in with the surrounding landscape.

✚ 2. Wood roofing shingles shall not be allowed in the canyons or foothills because of their potential to ignite during wildfires and increase structural damage.

19.73.060 LANDSCAPING AND VEGETATION

See also Section 19.72.030.H., "Tree and Vegetation Protection" for those properties located in the Foothills and Canyons Overlay Zone.

A. Preserve existing trees and vegetation.

1. To the maximum extent feasible, existing concentrations of significant trees and vegetation shall be preserved and remain undisturbed as an important site amenity. For the purposes of this Chapter, "significant trees and vegetation" shall be defined as set forth in Section 19.72.070. (*See also* Section 19.73.030.E. above.)

   a. Notwithstanding the provisions set forth in this section, existing vegetation located within thirty (30) feet of the primary structure on a site shall be thinned and regularly maintained to help minimize the risk of property damage from wildfire, and to provide space for fire-fighting equipment and personnel.

   b. When landscaping within this 30-foot fire-break area, use of fire-resistant plants is strongly encouraged. (For a list of fire-resistant plants, contact the Wasatch-Cache National Forest, Salt Lake Ranger District, or the Utah Division of Forestry, Fire, and State Lands.)
   See also Section 19.72.030.H.3.c., "Wildfire Hazards and Tree/Vegetation Removal."

2. To the maximum extent feasible, dryland species shall be selected for slope revegetation, and irrigation will be minimized to reduce potential problems.

B. Landscape to retain harmony between the various elements of a landscape and to preserve its original character.

1. Landscaping for new development shall incorporate natural features in the landscape such as trees, significant vegetative patterns, interesting land forms, rocks, water, views and orientation.

2. Landscaped areas shall be an integral part of the development project, and not simply located in left-over space on the site. New planting shall blend in with the existing landscape.

3. All disturbed areas shall be revegetated using native or adapted plant species and materials characteristic of the area.

4. Use of fire-resistant plants is also strongly encouraged. (For a list of fire-resistant plants, contact the Wasatch-Cache National Forest, Salt Lake Ranger District, or the Utah Division of Forestry, Fire, and State Lands.)

19.73.070 GRADING

A. Limit site grading for buildings to preserve existing land forms.
See Section 19.72.030.C., "Grading Standards." (*See* Figures 16 and 17.)

1. To the maximum extent feasible, building designs that require extensive cut and fills shall not be allowed.

2. To the maximum extent feasible, modification of the natural terrain shall be minimized by retaining the natural landscape, including existing trees and vegetation.

3. To the maximum extent feasible, slopes steeper than 30 percent shall not be disturbed.

4. To the maximum extent feasible, buildings, driveways, and roads shall follow the natural contours of the site. Site grading shall follow Appendix Chapter 33, "Excavation and Grading," of the *Uniform Building Code* (1994 edition, as amended from time to time) and "Best Management Practices" (1977) as set forth in the *Salt Lake County Erosion-Sediment Control Handbook* (1981 edition and as amended from time to time).

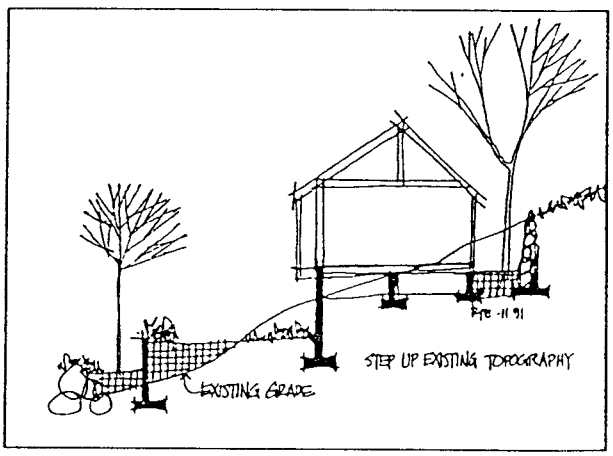

Figure 16 YES· Buildings should be designed to limit site grading

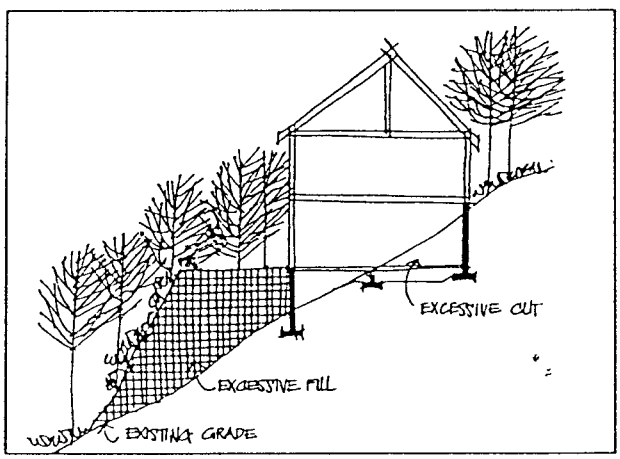

Figure 17. NO· Buildings shall not be designed with extensive cut or fill.

19.73.080 DRAINAGE

A Site design shall not change natural drainage patterns. (See Figure 18.)

1 All final grading and drainage shall comply with Appendix Chapter 33, "Excavation and Grading" of the *Uniform Building Code* (1994 edition and as amended from time to time) and "Best Management Practices" (1977) as set forth in the *Salt Lake County Erosion-Sediment Control Handbook* (1981 and as amended from time to time).

2 To the maximum extent feasible, development shall preserve the natural surface drainage pattern unique to each site as a result of topography and vegetation. Grading shall ensure that drainage flows away from all structures, especially structures that are cut into hillsides. Natural drainage patterns may be modified on site only if the applicant shows that there will be no significant adverse environmental impacts on site or on adjacent properties. If natural drainage patterns are modified, appropriate stabilization techniques shall be employed.

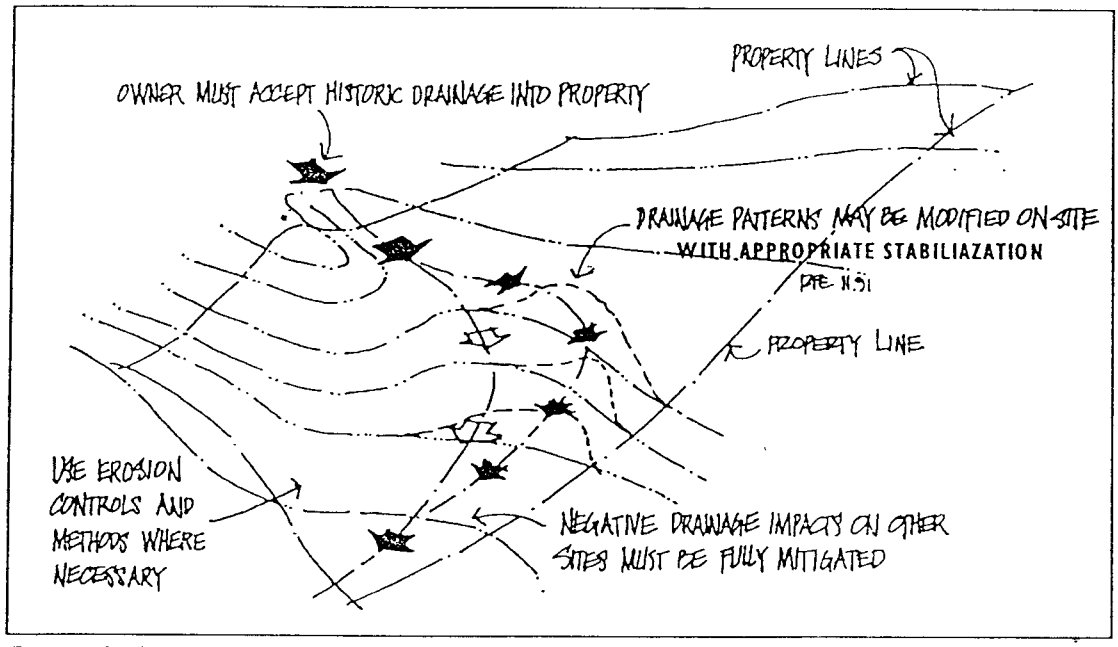

Figure 18 Site design shall not change natural drainage patterns.

3. Development shall mitigate all negative or adverse drainage impacts on adjacent and surrounding sites.

4. Standard erosion control methods shall be used during construction to protect water quality, control drainage, and reduce soil erosion. Sediment traps, small dams, or barriers of straw bales shall be located wherever there are grade changes to slow the velocity of runoff.

B. Locate buildings outside stream corridor buffer zones.

1. Permanent structures shall be located a minimum of 100 feet horizontally (plan view) from the ordinary high-water mark of stream corridors or other bodies of water. (*See* Figure 19.) At the discretion of the Development Services Director, and based on site-specific studies such as soils or vegetation, set-back distances may be reduced according to the modification provisions and criteria set forth in §19.72.060.B., or greater setback distances may be required. The Salt Lake County Development Services, Engineering Section, and the City/County Board of Health should be consulted in determining appropriate site-specific setback requirements. *See also* Section 19.72.030.J., "Stream Corridor and Wetlands Protection."

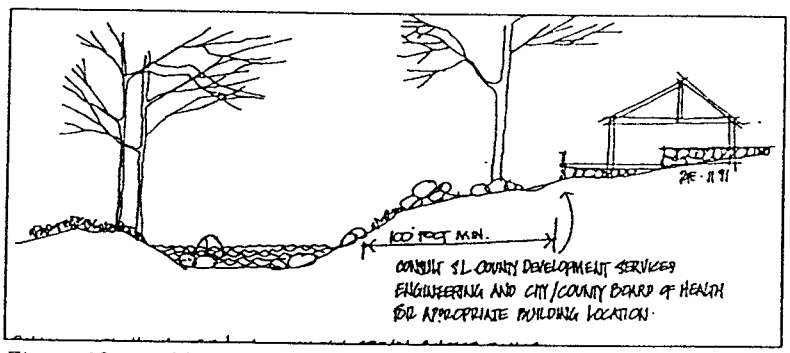

Figure 19: Buildings should not be located within stream buffer zones.

2. To the maximum extent feasible, developments shall not alter natural waterways.

C. Bridges for stream crossings are recommended. (*See* Figures 20 and 21.)

1. To the maximum extent feasible, the use of culverts to cross perennial streams shall not be allowed. Culverts may be used on small side drainages, across swales, and on ephemeral or intermittent streams. *See* Section 19.72.030.J., "Stream Corridor and Wetlands Protection."

2. Bridges and culverts shall be sized to pass 100-year storm events. Concrete or stone head walls and side walls shall be required to maintain the integrity of the bridge structure. *See also* Chapter 17, Flood Control & Water Quality, §17.08.090, "Replacement & New Bridge & Culvert Design Criteria."

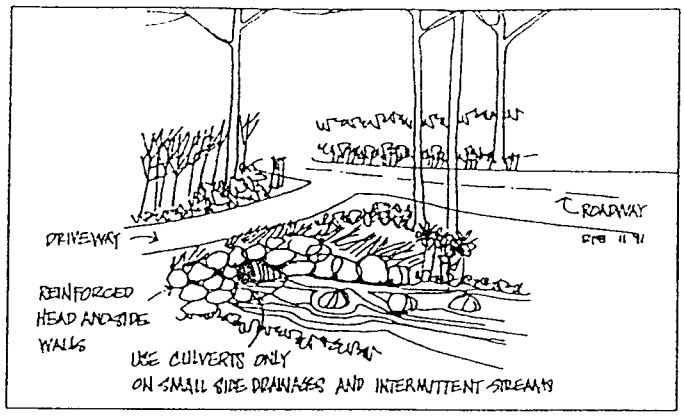

Figure 20: Culverts are allowed on small side drainages, across swales and on ephemeral or intermittent streams

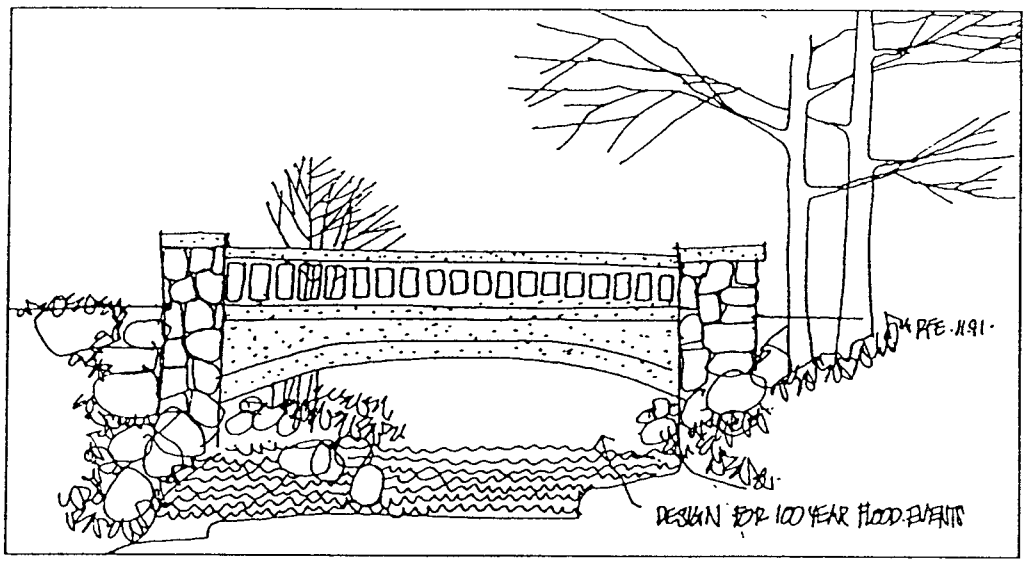

Figure 21: Bridges for stream crossings are recommended.

19.73.090 ACCESS, CIRCULATION, AND OFF-STREET PARKING

A. Design traffic circulation to respect existing topography, achieve acceptable slopes, and adhere to minimum width and turning standards.

1. Safe and adequate access shall be provided in all new development. Access shall be of adequate width to allow for snowplowing and snow storage.

2. Access roads shall avoid steep grades and sharp turning radii that can make access, especially in the winter, difficult.

3. Roads and driveways which run perpendicular to the contours of a site shall be prohibited. (*See* Figures 22-24.)

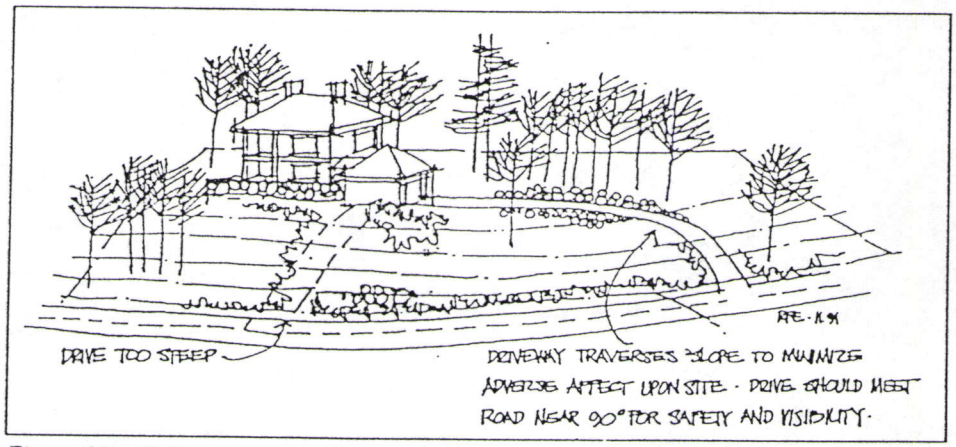

Figure 22: Driveways to residences shall avoid steep grades and respect the contours of the site.

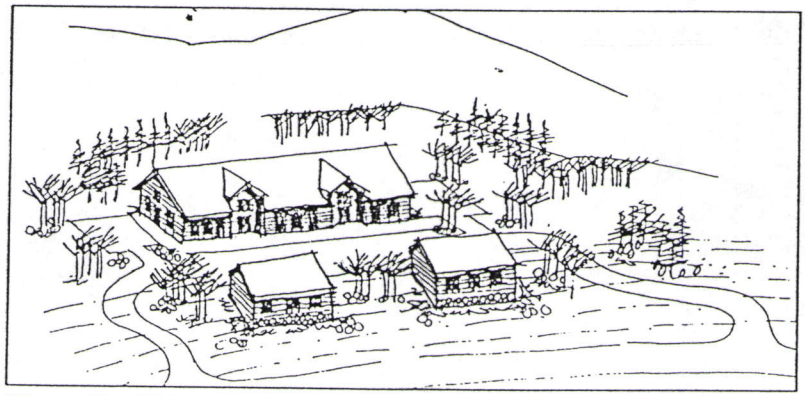

Figure 23: YES: Driveway access and circulation to commercial buildings should respect the site's contours.

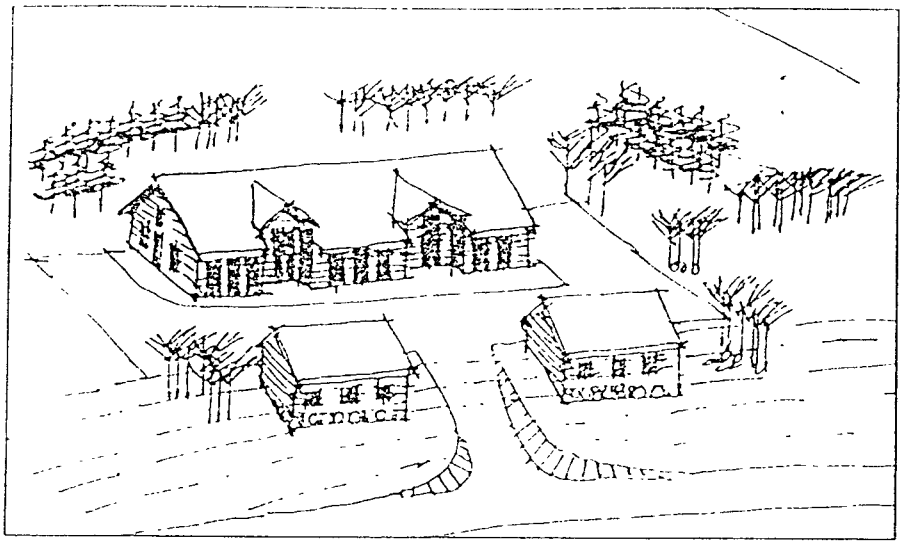

Figure 24 NO Roads and driveways which run perpendicular to the contours of the site shall be prohibited

4. To the maximum extent feasible, driveways and covered parking shall be sited on flatter ground and, if necessary, pathways shall be provided to principal buildings. Cars need not have direct access to the front door of a principal building.

B. Provide safe, adequate off-street parking with year-round access. (*See* Figures 25 and 26.)

1. New development shall provide off-street parking as required by this Zoning Ordinance.

2. Shared driveways and shared parking areas with adjoining owners are strongly encouraged in order to reduce maintenance costs and overall impacts on the environment.

3. Access to off-street parking areas shall be from a private driveway or roadway and not directly from a public street or road. Off-street parking areas shall be large enough such that persons accessing or leaving the site are not required to back out onto a public street unless the Development Services Director or the Planning Commission determines that the street is not a major thoroughfare and that no safety or traffic flow problems will result.

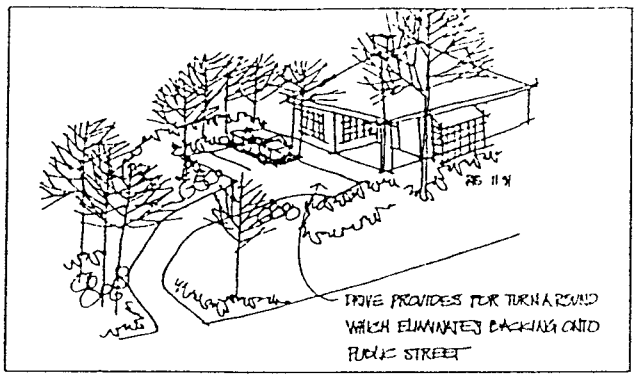

Figure 25: Provide adequate off-street parking with year around access

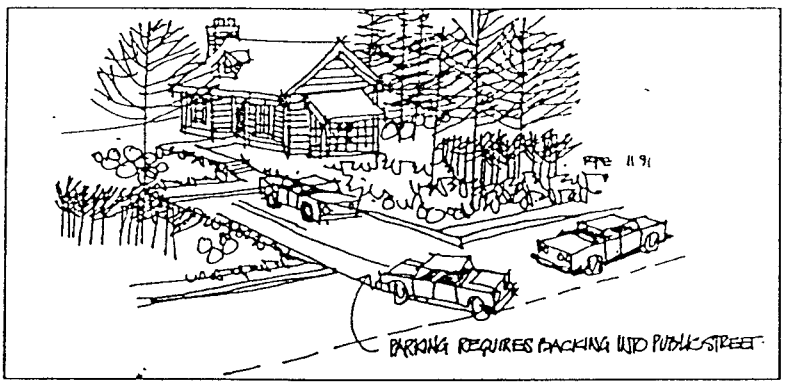

Figure 26: Off-street parking requiring backing onto major roads is discouraged.

4. The location of off-street parking facilities shall comply with this Chapter. Such areas shall be properly screened and be located on land proven to be suitable for development.

C. Design new roads and driveways to reduce their visual impact.

1. To the maximum extent feasible, roads and driveways shall be screened using existing land forms and vegetation and any cuts and fills shall be regraded to repeat adjacent land forms. To the maximum extent feasible, long tangents shall be avoided in favor of curvilinear alignments reflecting topography, and curve side roads as soon as possible after intersection with arterial roads or highways.

2. Cuts and fills for new roads and driveways shall be revegetated with native plant materials.

19.73.100 FENCES

A. Place fences to respect existing land forms, follow existing contours, and blend into the natural setting of the site. (*See* Figures 27-29.)

1. Fences as part of development on sensitive lands shall be limited to fences necessary to screen service and outdoor areas. (*See also* §19.72.030.C.7., "Grading Standards--Retaining Walls".)

2. Fencing used to screen patios, other outdoor areas, and service areas that are adjacent to buildings may be opaque. The use of natural or stained wood for such fencing is strongly encouraged. Other appropriate fencing materials include brick, rock, stone, and wrought iron.

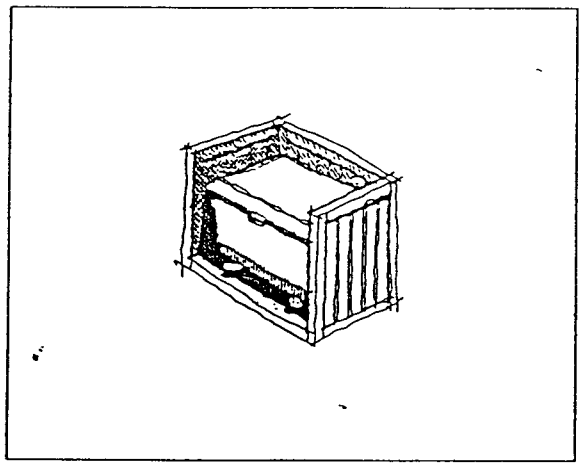

Figure 27: Opaque fence may be used to screen service areas

3. The following fencing materials shall not be allowed:
   a. Solid board;
   b. Concrete or concrete block;
   c. Chain link, except around telecommunications facilities and public utility compounds.
   d. Plywood;
   e. Painted materials; and
   f Vinyl, except rail fences for containment of horses.

4. Wooden rail fences and low rock walls may be permitted along arterial roads and highways, and to delineate property lines.

5. Fences located along property lines and arterial roads or highways are limited to a maximum of forty-two (42) inches in height.

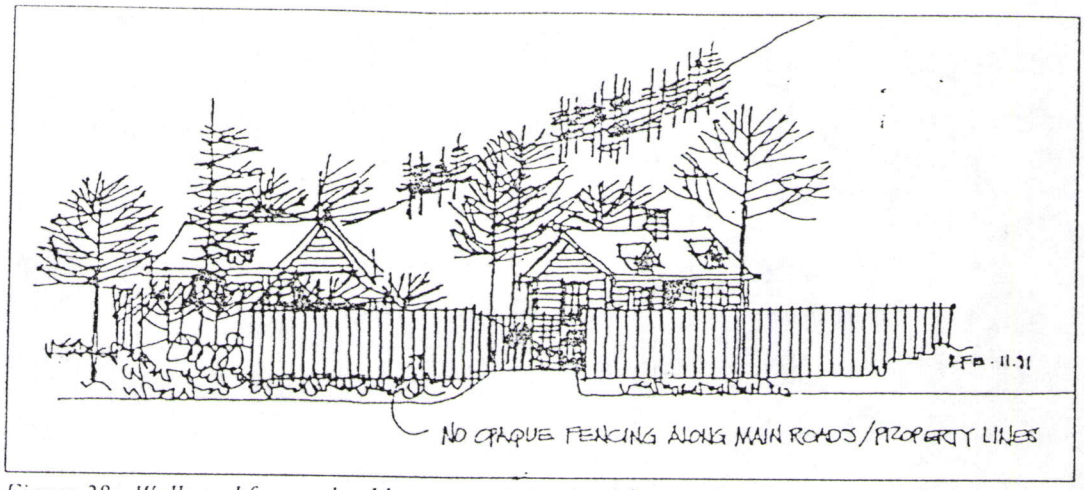

Figure 28: Walls and fences should respect existing land forms.

7. Solid barrier fences located along arterial roads or highways, or placed directly on a site's front property line, are out of character with the natural setting, block views, and shall be prohibited.

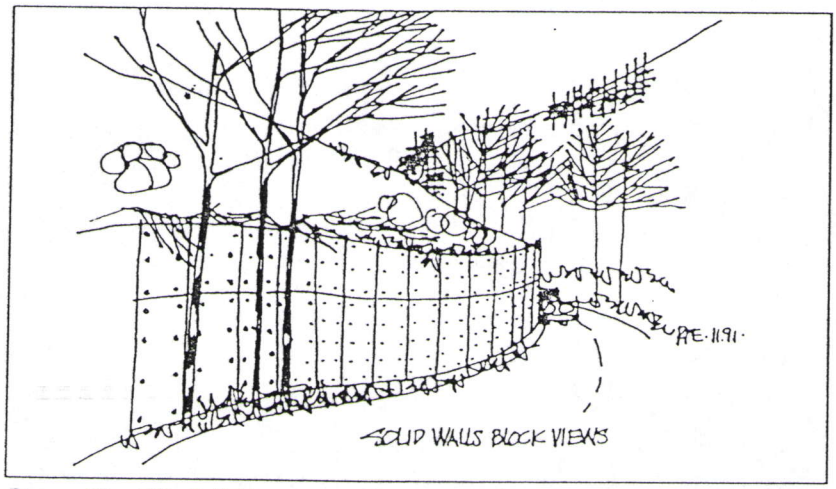

Figure 29: NO: Solid barrier walls are out of character with the natural canyon setting.

8. Walls and fences shall be reviewed on a site-by-site basis (during site plan review if applicable) and shall require a building permit.

19.73.110 NIGHT LIGHTING

A. Locate lighting fixtures only where needed to provide for the safe movement of people on the site. (*See* Figures 30-32.)

- Bright lighting of large areas should only occur where absolutely required by safety considerations, except that lighting for outdoor recreation areas shall be permitted. However, recreation areas must be sensitive to potential impacts its outdoor lighting may have on adjoining properties.

B. Outdoor lighting sources shall be shielded and directional.

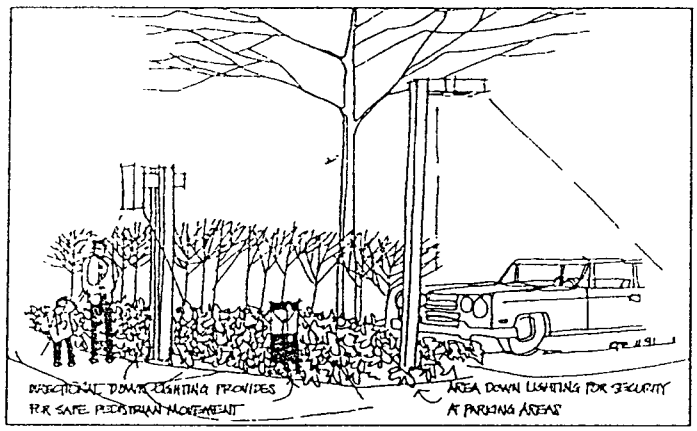

Figure 30: Lighting sources should be shielded and directional.

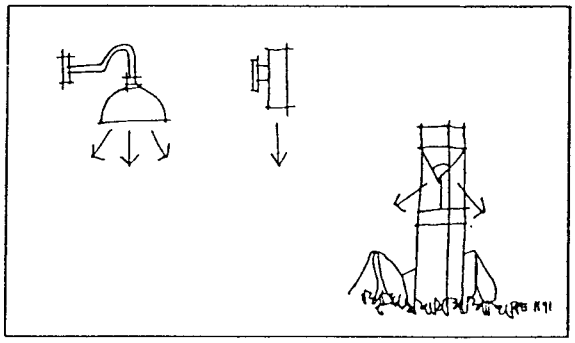

Figure 31: YES· Appropriate fixtures direct light downward

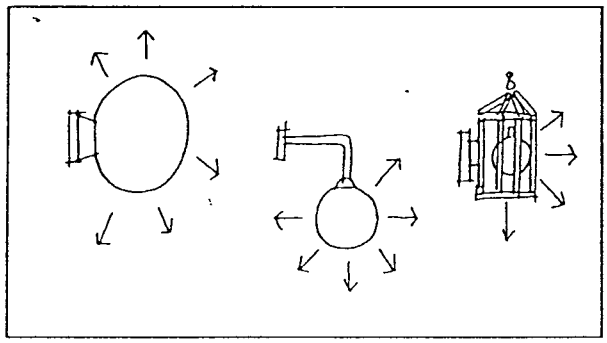

Figure 32: NO Inappropriate fixtures direct light outward